

ENOCLERUS SPHEGEUS (Fabr.)

The only constant sexual character found on this species is in the fifth (penultimate) abdominal sternite. In the male the posterior margin of this sternite is definitely concave. In the female the curve is not so pronounced. This character can be used successfully and accurately after some experience.

In alcoholic or mounted specimens the character is sufficiently good to allow perfect accuracy (as checked by examination of genitalia) in determining differences between sexes. In the living individual, examined under a hand lens or dissecting microscope, observation of this character is made difficult by the great activity of this species. The insect also has the habit of curling up the abdomen, and as a consequence the penultimate sternite is difficult to observe carefully.

The use of an anesthetic to quiet the beetles, or of refrigeration to slow them down, would make the determination fairly easy. While this character is constant, it is complicated by the behavior of the active beetle, and had best be regarded as a temporary aid in distinguishing the sexes.

REFERENCES

- Fabricius, J. C. 1775. *Systema Entomologiæ*. Appendix, p. 817. (*Lucanus virescens* Fabr.)
Olivier, A. G. 1790. *Entomologie*, 2; No. 19, 8. (*Trogosita virescens* Fabr.)
Westwood, J. O. 1835. *Zoological Journal*, 5:231. (*Temnochila* Westw.)

A NEW SPECIES OF ELEODES FROM OREGON, BELONGING TO THE SUBGENUS BLAPYLIS

(Coleoptera, Tenebrionidæ)

BY FRANK E. BLAISDELL, SR.

Stanford Medical School and Associate in Research, California Academy of Sciences, San Francisco, California.

The author has recently received a series of a species of *Eleodes* which belongs to the subgenus *Blapylis*. This species apparently inhabits a limited geographical area in Oregon.

Eleodes (Blapyllis) oregona Blaisdell, new species

Form moderately robust, differing in the sexes from oblong-suboval to ovate and about twice as long as wide. Color black, luster dull. Not pubescent, punctures inconspicuously setose.

Head moderately small, in width about equal to one-half that of pronotum and not quite as wide as pronotal apex; twice as wide as long before post-ocular line; sides scarcely more prominent than eyes, margins arcuate over antennal insertions, thence convergent and less arcuate, continuously so with sides of epistoma, and as a whole broadly and slightly sinuate across the position of oblique sutures; epistomal angles evenly arcuate, apex moderately emarginate. Frons slightly convex, more strongly so over antennal insertions and declivous against eyes; feebly impressed on the positions of transverse and oblique sutures, the former obsolete, the latter more or less indicated; surface very densely and coarsely punctate, punctures rather strongly impressed, less so on epistoma. Labrum relatively small, transverse, sides and angles evenly arcuate and convergent to apical emargination, the latter median, narrow and as wide as deep; surface feebly convex, equally divided by a fine transverse carinule into an apical and basal portion; the latter smooth and sculptureless, the former slightly declivous, finely and densely punctate, punctures setigerous, the marginal setæ longer, forming a fringe. In the specimens studied the articulating membrane is only visible at apical epistomal emargination. Eyes moderately short, superior lobe small. Tempora not strongly convex, gradually convergent posteriorly from margin of eyes.

Antennæ moderate in length and comparatively slender, about attaining pronotal base; second segment subannular, as long as wide, somewhat convergent basally; third elongate, obconical, about three times as long as wide at apex and three times as long as second; segments four and five equal in length, one-third longer than wide at apex; six, seven and eight inclusive, obconical, surface lines of fourth quite parallel, those of five, six and seven slightly arcuate; fourth to eighth inclusive equal in width of apices; segments nine, ten and eleven slightly wider and feebly compressed; ninth subspherical, tenth irregularly spherical in outline, eleventh obovate and truncate at apex.

Pronotum moderately transverse, one-third wider than long, widest at middle; apex moderately emarginate, angles evenly rounded, not in the least prominent anteriorly; sides broadly and strongly arcuate, moderately convergent anteriorly to apical angles, slightly less arcuate in posterior third, briefly sinuate in basal seventh, angles small and more or less rectangular; base broadly arcuate and one-fourth wider than apex; disk moderately and quite evenly convex, densely, coarsely and irregularly punctate, intervals noticeably varying in width; laterally punctures

less deep and smaller in the unimpressed submarginal area; marginal bead very fine throughout, slightly obliterated on apex.

Elytra differing more or less in form in the sexes, a little more than twice as long as pronotum, viewed from above; moderately convex in central area and arcuately declivous laterally, arcuately and vertically precipitous at apex; base transverse without marginal bead; humeri obsolete, continuously rounded with the sides, rarely slightly angulate; sides broadly and rather strongly arcuate, apex obtusely rounded; surface in the central area with well separated punctures, which are slightly impressed and not strongly defined, not in the least muricate, intervals flat; laterally and apically gradually becoming small; oblique muricate tubercles intermixed in the humeral regions; extreme sides and apical declivity with scattered, round, smooth, shining points; epipleuræ sparsely punctate, punctures moderately small and more or less distinctly defined. *Scutellum* arcuate at apex, surface closely punctate, punctures small.

Ventral surface more shining and more or less polished. Pronotal sides quite strongly convex and rather densely set with small muricate points and somewhat rugose, especially on coxal convexities. Sterna and episterna densely punctate, punctures small and submuricate. Abdomen smooth, sparsely punctate, punctures small, somewhat denser at sides of first abdominal segment. Legs moderate in length and stoutness. Meta- and mesofemora not inflated and parallel. Metafemora and metatibiæ subequal in length, the latter moderately slender, slightly arcuate in basal fourth and gradually widened in apical fourth. Metatarsi three-fifths as long as their tibiæ; fourth segments about a third longer than the first, twice as long as the third, the latter about one-third longer than the second.

Male. Narrower, oblong-suboval. *Elytra* subparallel, sides less strongly arcuate. Antennæ a little longer. Abdomen flattened in middle third of first three segments; first segment densely punctate and more or less rugulose, others less densely so with some rugulation.

Female. Ovate and more robust. *Elytra* but little longer than wide, nearly circular in outline viewed from above, sometimes slightly straighter and convergent in about basal third to base; sides more or less evenly and strongly arcuate, continuously so with the humeri. Abdomen moderately convex, flattened between the coxæ, rather less strongly sculptured.

Measurements of types. Male: length 15 mm.; width 7 mm. Female: length 15 mm.; width 8.5 mm.

Holotype, female, No. 5188, Calif. Acad. Sci., Ent., Bear Springs, Oregon, May 18, 1940 (K. M. and D. M. Fender) in the Blaisdell collection. Allotype, male, No. 5189, Calif. Acad. Sci., Ent., same data, except collected on May 26. Paratypes,

forty specimens with same data, distributed as follows: collection of the California Academy of Sciences and that of the author, 11; American Entomological Society, 4; and K. M. and D. M. Fender, 28.

Oregona belongs to the Cordata Group of the subgenus *Blapylis*. Other species that may occur in the same faunal region are as follows: typical *cordata* Esch., *rotundipennis* Lec., *patulicollis* Blais. and *verrucula* Blais.

Oregona is to be recognized by its ovate form and dull luster. It is moderately robust and the elytra are quite circular, appearing slightly inflated. It is further distinguished by the moderately oblong-oval form of the male; the dull luster; the elytra narrower oval with sides more parallel; the pronotum transverse; the lateral margins broadly arcuate, most strongly so in middle third, less so posteriorly, but never broadly sinuate behind the middle where the margin is simply less arcuate or a little straighter; the sinuation feeble, strongest just before the small basal constriction and angles; humeri obsolete. The pronotal and elytral sculpturing is similar to but less coarse than in typical *cordata* Esch. where the pronotal lateral margins are obtusely subangulate at middle and distinctly more or less broadly sinuate behind the middle to the constricted base; the humeri are more or less obtusely angulate.

Rotundipennis Lec. is a smaller species and rather less robust, varying considerably in size and body form; the luster is more or less shining; the pronotal sides are distinctly more oblique behind the middle, more constricted at base and the angles more rectangular.

Patulicollis Blais. of the Parvicollis Group may occur with *oregona*. The species is oblong-oval in form, sometimes feebly subovate when the pronotum is less transverse; surface luster dull, the pronotum and elytra less convex; sides of the pronotum evenly arcuate to very near the base, the latter scarcely constricted; the pronotal surface less coarsely and densely punctate, punctures distinct, feebly impressed with intervals flat. Habitat: near Lake McElroy, Baha, Washington. One specimen came to hand with the series of *oregona* from the type locality.

Verrucula Blais. has the sides of the pronotum distinctly obtusely angulate, the disk very densely punctate, punctures quite equal in size; elytra densely tuberculate.